

...(ii) based on high power control, to control the on/off state of the switching element [Q1] so that at least one of an effective value (lighting value) and a peak value (see figure 4) of the lamp power provided for the lamp is increasing more than that *adjusted by constant lamp power control* (see figure 4c, column 9 in lines 19-8) based on high power control after the start of the lamp...

Applicants respectfully disagree.

Column 9, lines 19-25 actually disclose:

As shown in FIG. 4(c) each time a discharge lamp is added to the circuit, the output voltage rises to the lamp ignition voltage, and then is returned to a steady state operating voltage that is higher than the previous steady state operating voltage by an amount sufficient to maintain the lamp current in each lamp approximately the same as it was prior to the addition of the lamp...

Chang et al. is directed to adjusting voltage levels for a plurality of lamps connected in parallel as they start up one after another, while the present invention is directed to increasing one of the effective value and peak value of lamp power after startup for a single lamp during high power control, and to decrease the effective value of the lamp power to a prescribed power value during constant power control. FIG. 4(c) of **Chang et al.** is a plot of voltage v. time as the number of lamps in the circuit increases and decreases, while FIGS. 2-3 of the instant application are plots of power v. voltage for a single lamp.

More specifically, **Chang et al.** is configured (i) to control the on/off state of the switching element by a specific type of control. Column 7, lines 21-24 and FIG. 2 disclose that the circuit of FIG. 2 will regulate the steady state output voltage at 450 volts for all possible lamp combinations, i.e. for 0, 1, 2, 3 or 4 operating lamps in the 4-lamp fixture.

Thus, in **Chang et al.**, the circuit configured to control the on/off state of the switching element by lamp voltage control is different from the present invention which is configured to control the on/off state of the switching element by lamp current control.

The circuit of Chang et al. controls the on/off state of the switching element by lamp constant voltage (450V) control, but it is not disclosed whether or not the circuit controls the on/off state of the switching element by constant power control.

Moreover, Chang et al. quickly increases lamp voltage from the steady state voltage of 450 volts to the reliable ignition voltage of 550 volts, in order to ignite a newly added lamp. (See column 7, lines 52-55, column 1, lines 59-60, and FIG. 4(a)). After the start of the added lamp, the lamp voltage is returned to the steady state voltage of 450 volts.

Thus, Chang et al. controls the on/off state of the switching element by lamp constant voltage (450V) control after the start of the lamp.

Therefore, Chang et al. is completely different from the present invention which is configured: (i) to control the on/off state of the switching element by lamp current control; and then (ii), based on high power control, to control the on/off state of the switching element so as to increase more than that adjusted by control power control.

In addition, because a high intensity discharge lamp has no filament, the technology of Chang et al. detecting filament current flow (claim 1) cannot be applied to a discharge lamp ballast for a high intensity discharge lamp.

Thus, the 35 U.S.C. §102(b) rejection should be withdrawn.

2. Claims 22-23 stand rejected under 35 U.S.C. §103(a) as unpatentable over Chang et al. in view of U.S. Patent 6,992,718 to Takahara (hereafter "Takahara").

Applicants respectfully traverse this rejection.

Takahara has been cited for teaching a discharge lamp ballast functioning as a projector for a projection display apparatus (column 110, lines 20-25) having a color filter [124] whose transmission color by light from the light source and control circuit synchronizes timing of polarity inversion of the lamp voltage applied across the lamp (column 73, lines 10-18).

Takahara, like Chang et al. fails to teach, mention or suggest the features of claim 1, as discussed above, from which claims 22-23 depend.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

The Examiner has indicated that claims 2-7 and 10-15 have been allowed.

The Examiner has indicated that claims 17-21 would be allowable if rewritten in independent form. Applicants respectfully defer this action until a FINAL Office Action, if any, is received.

In view of the remarks above, claims 1-23 are in allowable condition and a Notice of Allowance is earnestly solicited.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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